

REMARKS

The claims in the application are 1-20 and Claims 21-23 added by the present amendment.

Favorable reconsideration of the application as amended is respectfully requested.

The claims have been amended to eliminate the objections raised in paragraph 2 of the Office Action and rejections under 35 U.S.C. §112, second paragraph raised in paragraph 5 of the Office Action. Claims 21-23 introduced herein are directed to the feature of wheels 5 mounted underneath pivotally-arranged frame 6 and therefore find clear support throughout the present application and drawings (reference is being made to preferred embodiments of the present invention illustrated in the drawings of the present application).

Claims 3, 10-12, 18 and 20 have been indicated allowable in paragraphs 8 and 9 of the Office Action, if amended into appropriate independent form. Accordingly, Claims 3, 10, 11, 18 and 20 have been amended into independent form herein. Concerning the objection to the drawings raised in paragraph 1 of the Office Action, it is respectfully pointed out the "pre-determined boundary" or zone 30 is quite clearly illustrated in Fig. 6 and described, e.g, in the paragraph bridging pages 9 and 10 of the specification. Independent Claim 1 has been clarified in this regard, to address the rejections under 35 U.S.C. §112, second paragraph, *supra*. Accordingly, it is respectfully requested the objection to the drawings be withdrawn as all claimed features are quite clearly illustrated in the drawings.

Accordingly, the only outstanding issue is the prior art rejection of the claims Claims 1, 2, 4-9, 13-17 and 19 have been rejected under 35 U.S.C. §103 as obvious over U.S. Pat. No. 5,947,516 to Ishikawa in paragraph 7 of the Office Action. However, it is respectfully submitted the invention as recited in all pending claims herein is patentable over this reference, for the following reasons.

The present invention explicitly improves stability of a moving vehicle having at least two mutually-separated wheels 3 mounted upon a first side of a chassis 1 and rotatable about axes substantially fixed in position relative to the chassis 1, and at least two mutually-separated wheels 5 mounted upon a frame (part) 6 in turn pivotally mounted upon the chassis 1 along a central longitudinal axis 8. This arrangement, as claimed, provides a stability area for the vehicle in the shape of a triangle in a horizontal plane as illustrated, e.g., in Fig. 6 of the present application.

In particular, an arrangement 12 to determine position of the vehicle's tipping point I and means 17 for fixing the frame (part) 6 relative to the chassis 1 to increase the triangular stability area 18 defined by the wheels 3, 5 are provided. More specifically, as recited in independent Claim 1, the arrangement 12 continuously determines the position of the vehicle's tipping point I such that

when the vehicle's tipping point I reaches a boundary area 19 of the stability triangle 18, the fixing means 17 gradually increase resistance against pivoting of the frame (part) 6 relative to the chassis 1 about the longitudinal axis 8 on increasing distance of the tipping point I from the triangle's 18 centre to gradually increase the stability area 20, and

when the tipping point Γ reaches a pre-determined boundary 30, the fixing means 17 completely fix the frame part 6 relative to the chassis 1 and form a stability area 22 defined by the wheels 3, 5.

More specifically, as recited in independent Claim 2, means 32 are provided for attaching each wheel 5 on the frame part 6 to

(i) fix the wheel 5 in position relative to the frame part 6 and ensure the frame part 6 has fixed distance to the ground on which the wheel 5 is resting on application of a load to the wheel 5 below a pre-determined level, and

(ii) allow a movement of the wheel 5 towards the frame part 6 when the load on the wheel 5 exceeds the pre-determined level, while storing potential energy and decreasing the distance between the frame part 6 and the ground on which the wheel 5 is resting.

The features of the presently claimed invention together with the accompanying advantages attained thereby are neither disclosed nor suggested by Ishikawa '516 for the following reasons.

Ishikawa '516 was cited under category A of the International Search Report in the priority PCT application, i.e., of merely background interest. Fig. 6 of Ishikawa '516 just shows wheels 19 mounted upon lateral ends of rear axle 16 and fails to suggest means 32 for alternatively fixing and allowing movement of wheels 5 relative to pivotal frame part 6 as recited, e.g., in independent Claim 2. Attention is respectfully called, e.g., to dependent Claim 21-23 which recite wheels 5 being mounted underneath movable frame part 6.

Furthermore, Ishikawa '516 is limited to either permitting or preventing pivoting of rear axle 16. There is no suggestion in Ishikawa '516 of gradually increasing resistance against tipping as the tipping point, i.e., center of gravity I reaches the boundary area 19 of the stability triangle, and also completely fixing the movable frame part 6 to the chassis 1 when the tipping point I reaches a pre-determined outer boundary 30, as recited in independent Claim 1. Concerning the assertion on page 4 of the Office Action that recitation "gradually increasing resistance" fails to structurally define the claimed apparatus over prior art apparatus, it is respectfully pointed out independent Claim 1 has been amended to recite, among other features, when the vehicle's tipping point I reaches a boundary area 19 of the stability triangle 18, the fixing means 17 are structured and arranged to gradually increase resistance against pivoting of the frame (part) 6 relative to the chassis 1 about the longitudinal axis 8 on increasing distance of the tipping point I from the triangle's 18 center, to gradually increase the stability area 20, and

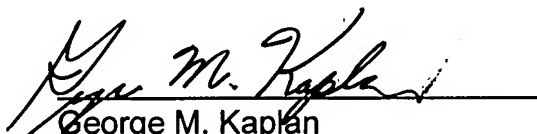
when the tipping point I reaches a pre-determined boundary 30, the fixing means 17 are structured and arranged to completely fix the frame part 6 relative to the chassis 1 and form a stability area 22 defined by the wheels 3, 5.

Independent method Claim 14 has been amended in analogous fashion to independent Claim 1 *supra*. The remaining art of record has not been applied against the claims and will not be commented upon further at this time.

Accordingly, in view of the forgoing amendment, accompanying remarks and explicit statements in the Office Action, it is respectfully submitted all claims pending herein are in condition for allowance. Please contact the undersigned attorney should there be any questions. A petition for an automatic one month extension of time for response under 37 C.F.R. §1.136(a) is enclosed in triplicate, together with the requisite petition fee and fee for additional claims introduced herein.

Early favorable action is earnestly solicited.

Respectfully submitted,


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